



Presentation to WATS  
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# Outline

- Pilot Professionalism
- Maintenance Issues



# Pilot Professionalism

## *Problem*

- Loss of military pilot pipeline
- Military: “Right Stuff” or out

## *Current Civilian System*

- Written test: Knowledge
- Flying test: Skills and knowledge
- *Not tested: Judgment or professionalism*
- *No limit on how many times to take tests*



# Abundant Professionalism

- Hudson River landing (2009)
- Gliding to the Azores (2001)
- Sioux City (1989)
- Gimli Glider (1983)

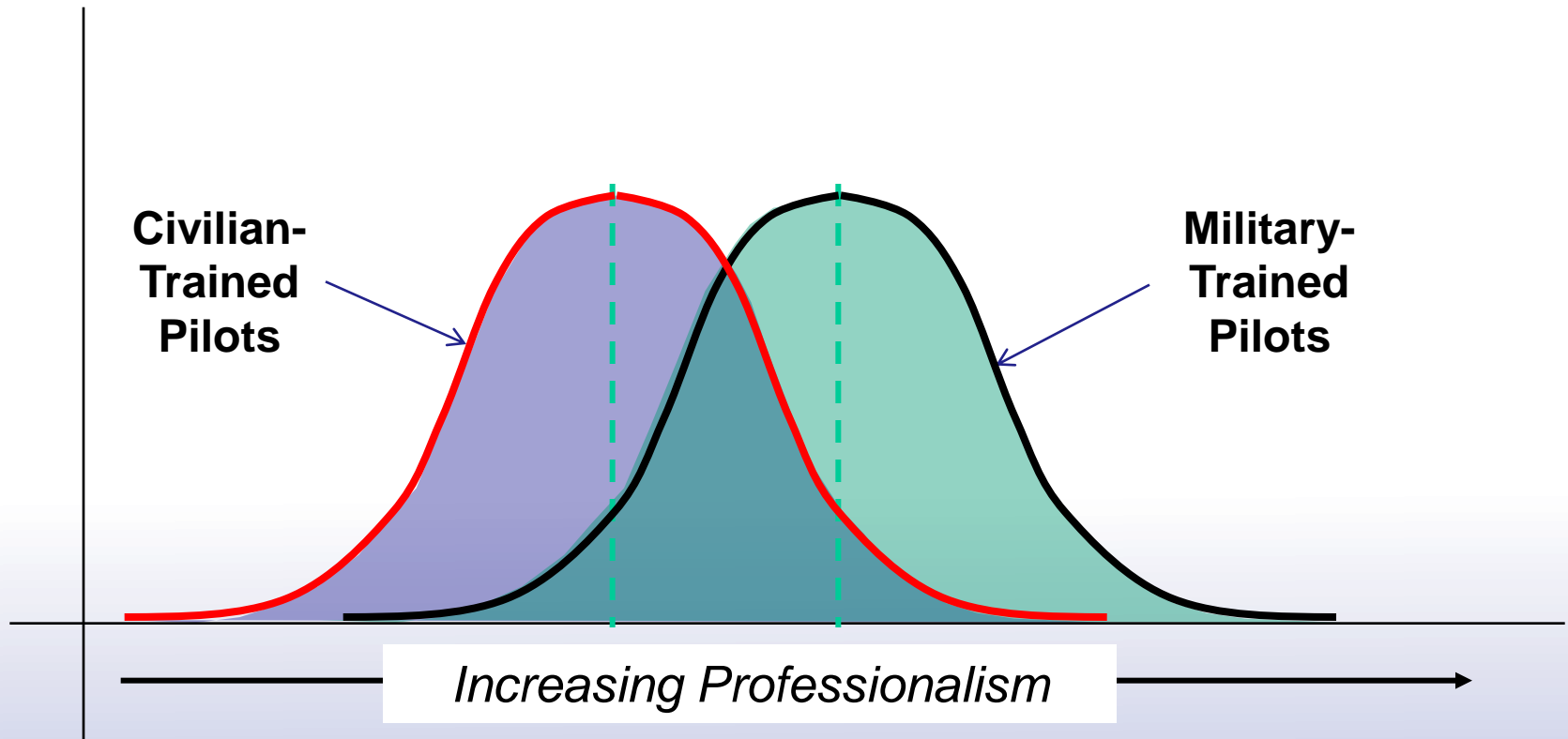


# Lack of Professionalism

- Let's try FL 410 (2004)
- Takeoff without runway lights (2006)
- Stick shaker: PULL! (2009)
- Minneapolis over-flight (2009)



# Need to Shift the Bell Curve



# The Training Challenge

- Initial training must:
  - Develop knowledge and skills
  - Be evaluated by more than just (eventually) passing knowledge and skill tests
  - Also develop and instill good judgment and professionalism
  - “Weed out” those with inadequate judgment and professionalism
- Recurrent training must:
  - Continue to develop and strengthen all of the above



# Maintenance Issues

- Quality of maintenance and inspections
- Training
- Human Factors awareness





# Quality of Maintenance and Inspections

- Las Vegas, 2011
  - Best practices, e.g., work cards
  - Use of degraded hardware (also Reno, 2011)
- Charlotte, 2008
  - Functional check of each critical flight system
- Hawaii, 2007
  - Maintenance and inspection QA
- Manchester, NH, 2005
  - Clarify on-condition maintenance programs



# Training: Some Questions

- Does one size fit all?
  - Compare: Type ratings for pilots
- OJT
  - Effectiveness if
    - Trainer doesn't enjoy training?
    - Trainer is not good at training?
  - Need for regulatory requirements?
- Simulators?
  - Not regulated
  - Use is increasing
  - Significant potential for improvement



# Accident Training Recommendations

- Charlotte, 2008
  - Require approval of maintenance training programs
  - Develop OJT training requirements
- Philadelphia, 2008
  - Require OJT for mechanics performing required inspection items
  - Require OJT for inspectors of required inspection items
- Hawaii, 2007
  - Model-specific helicopter training for air tour operators



# Human Factors Awareness

- Las Vegas, 2011
  - Initial and recurrent HF training, including fatigue
  - Duty-time requirements for mechanics
- Charlotte, 2008
  - HF programs to reduce likelihood of maintenance human error



# Conclusion

*As systems in aviation become increasingly complex, safety will continue to improve only if, in addition to other important improvements, the quality of training of pilots and mechanics continues to improve*

